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ABSTRACT

This edition focuses on the topic of closing the achievement gap from the perspectives of urban and suburban school districts. After an introduction by Judy Stewart, the first article, "Addressing Racial Disparities in High-Achieving Suburban Schools" (Ronald F. Ferguson), shares findings from a recent survey of more than 34,000 students in grades 7-11 in 15 school districts across the nation. The survey asked students about their home resources, why they work hard in school, and what courses they take, among other questions. The districts make up the Minority Student Achievement Network, a group of middle- and upper-income districts committed to addressing the achievement gap in their respective school communities. Despite higher overall achievement patterns in these districts, the study finds persistent racial and ethnic performance gaps. The second article, "Building Student Achievement: In-School and Out-of-School Factors" (Reginald Clark), shares findings from a body of research on closing achievement gaps in urban school communities. Schools in four districts completed surveys and observational studies. Results found five influential factors for improved student achievement, which include teachers' actions in the classroom, students' weekly participation in high-yield in-school and out-of-school activities, and parent-teacher communications. The two studies used different indicators to measure socioeconomic status (SES). One found that SES was an important predictor of achievement, and one found that it was not. (SM)

# Closing the Achievement Gap in Suburban and Urban School Communities

**NCREL Policy Issues**
**A Research-Based Analysis of Educational Issues**
**Issue 13**
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**North Central Regional Educational Laboratory**

**Ronald F. Ferguson**
**Reginald Clark**
**Judy Stewart**

NCREL
# POLICY ISSUES
Issue 13 December 2002
A Research-Based Analysis of Education Issues

***Closing the Achievement Gap in Suburban and Urban School Communities***

This edition of *Policy Issues* focuses on closing the achievement gap. It features an overview by Judy Stewart and findings from research studies conducted by Ronald F. Ferguson and Reginald Clark.

## About This Issue

*By Judy Stewart, Ph.D.*

This edition of *Policy Issues* looks at the topic of closing the achievement gap from two perspectives: suburban school districts and urban school districts. Harvard University researcher Ronald F. Ferguson, Ph.D., shares findings from a recent survey of more than 34,000 students in Grades 7-11 in 15 school districts across the nation. These districts make up the Minority Student Achievement Network (MSAN), a group of middle- and upper-income districts committed to addressing the achievement gap in their respective school communities. (Information on MSAN is available online at ***www.msanetwork.org***.) Despite higher overall achievement patterns in these districts, Ferguson finds persistent racial and ethnic gaps in performance.

The survey asked students about their home resources, why they work hard in school, what motivates them to achieve, what courses they take, and more. In analyzing the data, Ferguson found many similarities across student groups but also important differences.

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## *A Message From Gina Burkhardt, NCREL Executive Director*

*Welcome*

*With the passage of the No Child Left Behind Act, closing the academic achievement gap between poor and minority students and their affluent and majority peers has taken on new and urgent significance. This landmark legislation comes on the heels of exciting research indicating that having a high-quality teacher can substantially negate the impact of disadvantages associated with race or low income. NCREL is committed to providing policymakers with sound research to help make sense of the many recommendations to improve the academic performance of all students—especially low-income and minority students.*

*Yet one of the greatest challenges to understanding the achievement gap is that it cuts across income and geography. In other words, there are racial and ethnic gaps in performance not only between poor and affluent children but also between middle-income students and upper-income students. Whether students attend inner-city schools or well-resourced suburban schools, the gap persists. In this special, double edition of* Policy Issues, *two leading experts share their research findings to address what accounts for these gaps and what policymakers can do to address them.*

## Addressing Racial Disparities in High-Achieving Suburban Schools

*By Ronald F. Ferguson, Ph.D.*

On January 8, 2002, President Bush signed into law the federal No Child Left Behind Act of 2001. Among other important features, this legislation dictates that states should publish achievement results separately for racial and ethnic groups and work to alleviate intergroup disparities. Thus, for the first time in the nation's history, raising achievement levels among racial and ethnic minorities and closing achievement gaps are explicit goals of federal policy.

Improving the quality of inner-city schools will be an important aspect of pursuing these goals, but it will not be sufficient. Suburbs must respond as well. An analysis of U.S. Census data for the year 2000 indicates that 33 percent of the nation's African-American children, 45 percent of Hispanic children, 54 percent of Asian children and 55 percent of white children live in suburban communities. Some children, attend poor, segregated schools, similar to the poorest in the inner city, while others attend racially integrated schools in well-off communities where

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See questions legislators ask on page 19.

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Significantly, he found no racial or ethnic differences in effort or motivation to succeed among students in the same grade and taking the same classes. However, Ferguson found that black and Hispanic students have fewer family background advantages—such as access to books, computers, and extracurricular opportunities—than whites and Asians. In addition, black and Hispanic students complete less homework than their white and Asian peers (though they report spending as much time doing their homework as whites), and report understanding less of their teachers' lessons than do whites and Asians. Finally, Ferguson found that black and Hispanic students reported teacher encouragement to be a particularly strong motivating factor for their success.

Ferguson says that closing the achievement gap among students may require attending jointly to teachers' content knowledge, pedagogical skill, and relational skills. To reach this goal, policymakers should support professional development programs that equally emphasize content, pedagogy, and relationships. Schools should seek to provide black and Hispanic students with more educational resources outside the home after school, should identify and respond to skill or knowledge deficits that underlie comprehension problems, and should encourage teachers to routinely incorporate effective forms of encouragement into their classroom practices.

The second report, authored by Reginald Clark, Ph.D., president of Clark and Associates, shares findings from a body of research on closing achievement gaps in urban school communities. Schools in four districts participated in a series of survey and observational studies aimed at understanding the in-school and out-of-school conditions that support students' academic achievement. Clark looked at standardized reading test scores and factors that differentiate student performance.

Clark documents the importance of five influential factors for improved student achievement, especially among disadvantaged urban students: (1) teachers' actions in the classroom; (2) students' weekly participation in high-yield, in-school and out-of-school activities; (3) quality of students' participation in out-of-school activities; (4) parental beliefs and expectations; and (5) parent-teacher communication.

Clark found that the types and amounts of constructive in-school and out-of-school learning activities contribute to a success-oriented lifestyle. Specifically, he found that high-achieving students spend at least three hours a day with teachers doing structured learning activities; spend between 8 and 15 hours a week in high-yield, out-of-school learning activities; show a high level of enthusiasm, focus, and leadership in their activities; limit their unstructured leisure or nonlearning activities (such as watching television or doing chores); receive consistent messages from their parents valuing academic achievement; and benefit from parent-teacher partnerships that are vested in their academic success.

Significantly, Clark did not find a positive relationship between student ethnicity, family income, and student achievement. In fact, he found the opposite. Clark found that "when instructional-process factors are taken into account, student ethnicity and parent socioeconomic status are nearly eliminated as impacts on student achievement."

Of significant note, the two papers use different indicators to measure socioeconomic status. (Ferguson uses number of books in the home, parent level of education, and other factors; Clark uses family and student participation in a federally funded free or reduced-price lunch program.) Ferguson finds that socioeconomic status is quite important as a predictor of achievement, while Clark finds that it is not. This difference may or may not be due to the differences in measures used.

The full reports of Ferguson and Clark will be available on NCREL's *Closing the Achievement Gap* Web site (www.ncrel.org/gap/). In this edition of *Policy Issues,* each author presents an overview of his findings with special attention to those in-school and out-of-school factors that hold promise for closing achievement gaps among groups of students.

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***Judy Stewart, Ph.D.**, is a former program director of policy with NCREL's Education Decision Support Systems, where she had leadership for directing NCREL's achievement gap initiative. She now resides in Virginia and is an independent consultant.*

*continued from "Addressing Racial Disparities in High-Achieving Suburban Schools," page 1*

resources are relatively abundant and schools are reputedly excellent.

This paper concerns racial and ethnic achievement disparities in places where schools are reputedly excellent. All racial and ethnic groups in these districts are represented throughout the achievement distribution—at the top and the bottom. However, blacks and Hispanics are underrepresented at the top and heavily overrepresented at the bottom.

Following are some findings from a recent survey of secondary school students in high-performing suburban school districts. Findings concerning encouragement focus attention on the possibility that effective teacher-student relationships may be especially important resources for motivating black and Hispanic students in particular. When teachers have strong content knowledge and are willing to adapt their pedagogies to meet student needs, adding good teacher-student relationships and strong encouragement to the mix may be key. Such relationships and encouragement may help black and Hispanic students seek help more readily, engage their studies deeply, and ultimately overcome skill gaps that are due in substantial measure to past and present disparities in family background advantages and associated social inequities. Therefore, this paper emphasizes the importance of professional development programs that have a combined emphasis on content, pedagogy, and relationships.

## New Data from High-Achieving Suburban Districts

Until recently, racial and ethnic achievement disparities in elite suburban school districts were seldom discussed in public. Schools took pride, as they still do, in the numbers of graduates scoring high on college entrance exams and matriculating to prestigious universities. Public officials, parents, and teachers alike considered the latter achievements to be proof-positive that the quality of education was high. Not surprisingly, the idea that schools and teachers should be searching relentlessly for ways to raise achievement—with special attention to African-American, Hispanic, and low-income students—was seldom a focus.

Recently, however, public discourse has begun changing. In 1999, 15 middle- and upper-middle-income districts in Ohio, Michigan, Wisconsin, Illinois, Massachusetts, New York, New Jersey, North Carolina, California, and Virginia formed the Minority Student Achievement Network (MSAN). Together, they acknowledged the racial and ethnic achievement disparities in their primary and secondary schools. They resolved jointly to seek ways of narrowing gaps between European-American and Asian-American students, on the one hand, versus Hispanic and African-American students, on the other.

One of their first joint initiatives was an effort to understand better what students of different racial and ethnic groups were experiencing in school that might affect their engagement and achievement. During the 2000-01 school year, 95 schools across all 15 districts surveyed middle and high school students using a survey titled the "Ed-Excel Assessment of Secondary School Student Culture." The present paper reports some of what was learned from the responses of students in Grades 7-11 and discusses some implications. For these grades, the sample includes 7,120 blacks, 17,562 whites, 2,491 Hispanics, 2,448 Asians, and 4,507 mixed-race students. The analysis and associated tables in the paper pertain to this full sample of students.

Questions in the Ed-Excel survey cover family characteristics, opinions about the quality of instruction, enjoyment of studies, achievement motivations, course-taking patterns, effort, comprehension, grade-point averages, and more. It is well known that survey data can have self-reporting biases. Further, it is virtually impossible—with data collected at one point in time and with only one observation per student—to distinguish causal relationships among variables from mere correlations. Nonetheless, the data indicate strongly that there are common forces at work across the various states and localities represented.

Compared to whites and Asians, black and Hispanic students in MSAN districts have lower average test scores and grade-point averages and lag behind as well in self-reported measures of knowledge and skill. For example, in the Ed-Excel survey, black and Hispanic students report less understanding of their teachers' lessons and less comprehension of the material that they read for school. (See Table 1 on page 4.) These skill and knowledge gaps are predicted in part by differences in family background and home learning resources. The high degree of similarity among MSAN districts underscores the strength and consistency of historically rooted social and economic forces that today produce such patterns in so many different places.

The data here are not from an evaluation and cannot prove the efficacy of any particular policy intervention. Nonetheless, the revealed patterns

of data have implications for understanding the challenge of raising achievement and narrowing disparities. Specifically, opportunities for improvement will be increased if teachers and their allies in professional development focus jointly on all three legs of the instructional tripod (content, pedagogy, and relationships) as they search for ways of helping all students, but especially low achievers, to achieve at higher levels.

**Table 1**

**Racial Distributions for Three Achievement Gap Indicators**

Numbers are percentages in each response category for each racial or ethnic group.

***Panel A: What was your grade-point average last term?***

| | Black | White | Hispanic | Asian | Mixed |
|---|---|---|---|---|---|
| D+ or below | 9 | 2 | 8 | 3 | 8 |
| C- to C+ | 35 | 12 | 26 | 12 | 22 |
| B- to B+ | 40 | 36 | 45 | 35 | 38 |
| A- to A | 15 | 50 | 21 | 50 | 32 |
| Column Total | 100 | 100 | 100 | 100 | 100 |

***Panel B:* How much of the material that you read for school do you understand very well?***

| | Black | White | Hispanic | Asian | Mixed |
|---|---|---|---|---|---|
| About half or less | 55 | 29 | 56 | 42 | 41 |
| A lot | 30 | 35 | 30 | 31 | 30 |
| Almost all | 15 | 35 | 14 | 27 | 29 |
| Column Total | 100 | 100 | 100 | 100 | 100 |

***Panel C: What percentage of the time do you completely understand the teacher's lesson?***

| | Black | White | Hispanic | Asian | Mixed |
|---|---|---|---|---|---|
| About half the time or less | 48 | 28 | 46 | 31 | 38 |
| 65% to 89% | 36 | 44 | 36 | 38 | 38 |
| 90% or more | 16 | 29 | 18 | 30 | 24 |
| Column Total | 100 | 100 | 100 | 100 | 100 |

* Two districts did not use the version of the questionnaire that included the question covered by Panel B. By race, percentages not responding to the grade-point average question were 9.0% for blacks, 5.4% for whites, 10.3% for Hispanics, 6.4% for Asians, and 6.8% for mixed-race students. If responses were inputted for missing data, the distributions would change slightly with somewhat lower averages for all groups.

## Group-Level Differences in How Hard Students Work

Narrowing achievement gaps substantially among secondary students is likely to require special efforts from teachers. In addition, it may require black and Hispanic students to exert more effort than white classmates who currently have more academic knowledge and skill. After all, no runner ever came from behind by running the same speed as race leaders. Fortunately, 86 percent of blacks and the same percentage of Hispanics in these data agree that they could do a lot better in school. The comparable percentages for whites, Asians, and mixed-race students are 61 percent, 77 percent, and 75 percent, respectively.

The best measure of student effort in the Ed-Excel data is the student's report of how much time he or she spends studying and doing homework on weekdays after school. The data show very small racial differences among classmates. Only Asians stand out as studying more than other groups. Among students not enrolled in honors or Advanced Placement (AP) classes, Asians report that they study and do homework for about half an hour more per night than other groups. Among those enrolled in at least one honors or AP course, Asians report about two-thirds of an hour more. The differences between Asians and others in this

regard are statistically significant. Among blacks, whites, Hispanics, and mixed-race students, differences in time on homework come primarily from differences in the degree to which the groups enroll in honors and AP courses, not from differences among students taking the same classes. To a substantial degree, differences in honors and AP enrollments correlate with differences in skill.

Blacks, Hispanics, and mixed-race students report lower rates of homework completion than whites for any given amount of time spent studying. The differences are not huge, but they probably are large enough to be noticed by teachers and may cause some teachers to assume that blacks, Hispanics, and mixed-race students put less time and effort into their studies compared to white or Asian classmates. Although apparently correct concerning Asians, such assumptions about time and effort appear to be incorrect regarding how blacks, Hispanics, and mixed-race students compare to whites. Instead, time on homework is quite similar among these groups, but knowledge, skills, and background supports contribute to continuing gaps in homework completion and other measures of school performance.

Consequently, it appears likely that working harder than whites will be required if black and Hispanic students are to narrow the achievement gap. This result seems unlikely to occur without approaches to instruction that push them toward higher goals and make achieving those goals both feasible and rewarding.

## What Inspires Effort From Black and Hispanic Students?

Are particular strategies for eliciting effort likely to be more effective than others? Some insight in this regard comes from student responses to the following question in the Ed-Excel survey: "When you work really hard in school, which of the following reasons are most important to you? (Mark as many as apply to you.)" For each of 14 items, students could darken a bubble indicating that the item is important or they could leave the bubble blank.

Table 2 shows student responses by race/ethnicity, ranked in order from the item that received the most responses (among whites) to the item that received the least. For most items, the rank order from top to bottom is the same for all race/ethnic groups, and the percentage of the group indicating that any given item is important does not differ greatly across groups. For example, the top item among all groups is "I need the grades to get into college." The percentage of students indicating that this reason is an important one ranges from 71 percent of Hispanic students to 81 percent of Asians. Whites, blacks, and mixed-race students are nearly identical in their responses, at 78 percent of whites

**Table 2**

**Percentage of Respondents, by Race/Ethnicity, Who Selected Each Respective Response to the Question: "When you work really hard in school, which of the following reasons are most important to you? (Mark as many as apply to you.)"**

| | Black | White | Hispanic | Asian | Mixed |
|---|---|---|---|---|---|
| | | | *Percentages* | | |
| 1. I need the grades to get into college. | 77 | 78 | 71 | 81 | 77 |
| 2. To please or impress my parents. | 62 | 61 | 62 | 64 | 63 |
| 3. Help me get a better job. | 60 | 54 | 63 | 64 | 59 |
| 4. Prepare for tough college courses. | 62 | 53 | 59 | 64 | 58 |
| 5. I want to learn the material. | 57 | 52 | 57 | 56 | 53 |
| 6. My parents put pressure on me. | 44 | 47 | 39 | 50 | 49 |
| 7. The subject is interesting. | 37 | 41 | 40 | 40 | 40 |
| 8. My teachers encourage me to work hard. | 47 | 31 | 41 | 31 | 37 |
| 9. The teacher demands it. | 15 | 29 | 19 | 20 | 24 |
| 10. I enjoyed doing the assignment. | 32 | 29 | 33 | 33 | 32 |
| 11. To please or impress my teacher. | 29 | 28 | 29 | 29 | 29 |
| 12. I want to keep up with my friends. | 24 | 27 | 23 | 31 | 28 |
| 13. I don't want to embarrass my family. | 26 | 15 | 27 | 33 | 24 |
| 14. My friends put pressure on me. | 8 | 7 | 8 | 9 | 10 |

and 77 percent of blacks and mixed-race students. The percentage marking "To please or impress my parents" occupies a narrow range, from 61 percent of whites to 64 percent of Asians. Whites rank lowest and Asians rank highest regarding the extrinsic goals of preparing for good jobs and tough college courses. For the more intrinsically oriented purposes—specifically, "I want to learn the material" and "The subject is interesting"—group differences are very small. For most items in Table 2, no group stands out. The similarities are remarkable.

Two items show quite interesting race/ethnic differences, however, especially when considered together. Specifically when compared to whites, black and Hispanic students are more likely to indicate "My teachers encourage me to work hard" as a motivational factor and less likely to identify "The teacher demands it." Blacks are three times as likely to endorse encouragement as they are to cite teacher demands; 47 percent of blacks identify teacher encouragement as an important motivator, compared to 15 percent for teacher demands. Hispanics are two times as likely to cite encouragement (41 percent) compared to demands (19 percent), and whites are likely to cite each roughly equally (31 percent for encouragement and 29 percent for demands). Asians (31 percent for encouragement and 20 percent for demands) and mixed-race students (37 percent for encouragement and 24 percent for demands) fall between the patterns for whites on one side, versus blacks and Hispanics on the other.

Responses regarding demands and encouragement are mostly unrelated to measures of socioeconomic status. As Table 3 shows, no matter how many parents the students live with or how many years of schooling the mother has attained, race/ethnic dif-

**Table 3**

## Evidence That Encourage/Demand Responses for MSAN Students Are Mainly Racial/Ethnic Patterns, Not Associated With Socioeconomic Status

Question: When you work really hard in school, which of the following reasons are most important to you? (Check as many as apply to you)

| | Black | White | Hispanic | Asian | Mixed | Total |
|---|---|---|---|---|---|---|
| | | *Percentage in Each Cell Who Checked the Response: "My teachers encourage me to work hard."* | | | | |
| ***Living arrangements*** | | | | | | |
| One parent or neither | 47 | 31 | 41 | 31 | 41 | 40 |
| One parent and stepparent | 53 | 33 | 42 | 37 | 45 | 40 |
| Two parents | 45 | 32 | 41 | 31 | 34 | 34 |
| Column total | 47 | 32 | 41 | 31 | 38 | 36 |
| ***Mother's years of schooling*** | | | | | | |
| 12 or fewer | 50 | 33 | 39 | 32 | 42 | 40 |
| 13 to 15 | 45 | 32 | 38 | 30 | 41 | 38 |
| 4-year college graduate | 43 | 30 | 33 | 29 | 36 | 33 |
| Advanced degree | 44 | 31 | 42 | 27 | 33 | 33 |
| Column total | 46 | 31 | 39 | 30 | 37 | 35 |
| | | *Percentage in Each Cell Who Checked the Response: "The teacher demands it."* | | | | |
| ***Living arrangements*** | | | | | | |
| One parent or neither | 16 | 27 | 18 | 22 | 22 | 20 |
| One parent and stepparent | 17 | 29 | 23 | 18 | 26 | 24 |
| Two parents | 15 | 30 | 19 | 19 | 26 | 26 |
| Column total | 16 | 29 | 19 | 20 | 24 | 24 |
| ***Mother's years of schooling*** | | | | | | |
| 12 or fewer | 13 | 23 | 19 | 17 | 20 | 19 |
| 13 to 15 | 15 | 28 | 18 | 16 | 23 | 22 |
| 4-year college graduate | 17 | 29 | 18 | 19 | 25 | 26 |
| Advanced degree | 17 | 33 | 25 | 25 | 29 | 30 |
| Column total | 16 | 30 | 20 | 20 | 25 | 25 |

ferences in the relative importance of encouragement follow the same basic pattern. Not shown is that responses also are unrelated to this study's other measures of socioeconomic background.

This study has not examined precisely what teachers' statements, demeanors, and behaviors are interpreted by students in MSAN districts as demanding or encouraging and whether these differ by race and ethnicity. Fortunately, a few black and Hispanic students in MSAN schools have offered suggestions for understanding the findings concerning encouragement and demands. Concerning demands, they have very little to say. However, they have a great deal to say about encouragement. One student says, "I find it encouraging when teachers tell me I 'can do it' and when they don't make judgments about why I haven't done something that I was supposed to." Another says, "I find it encouraging when teachers give me full explanations to help me understand things, instead of short 'yes' or 'no' answers." A third student says, "I find it encouraging when teachers stay after school to give me extra help and don't seem like they're in a big hurry to go [home]."

Based on these and other anecdotal observations, encouragement seems to entail assurances from teachers that students have the ability to succeed and teacher behaviors that provide active support for success. Conversely, a demand is an order to submit to the power of the person making the demand and carries no assurance that the person making the demand really cares about the student or will offer any special assistance. Especially for students of color, survey responses indicate that teacher demands probably are not very effective.

## Visible Differences, Hidden Similarities

The Ed-Excel survey asked students to identify the characteristics of the most popular crowd in their first year of middle school or junior high. Black and mixed-race students cited "tough" more than did whites, Hispanics, or Asians. Conversely, larger percentages of whites, Asians, and mixed-race students reported that members of the most popular crowd were "self-confident" and "outgoing." For example, there are not many differences in the percentages of blacks responding that the most popular crowd is "tough" (35 percent), "outgoing" (36 percent) and "self-confident" (39 percent). However, whites identified "outgoing" (54 percent) and "self-confident" (53 percent) more than twice as often as they identified "tough" (22 percent). Although there are no survey responses from teachers, anecdotal reports from teachers suggest that group differences in demeanor continue through high school.

Based on homework completion rates and the ways that students carry themselves, teachers may assume that black and Hispanic students not only work less hard than white classmates but also place a lower priority on earning good grades and enjoy school less. The Ed-Excel survey responses from MSAN districts, however, do not support such inferences.

The Ed-Excel survey asked students whether their friends believe that working hard to get good grades is "very important," "somewhat important," "not too important," or "not at all important." Table 4, Panel A, shows only modest race/ethnic variation in how students responded. For each race/ethnic group, roughly 90 percent answered that their friends regard studying hard to get good grades as either "very important" or "somewhat important." The largest percentage answering "very important" was among blacks (56 percent), while the smallest percentage was among whites (42 percent). This result is the opposite of what many teachers might expect based on what they observe. Similarly, Panel B shows that groups are quite similar in responses concerning effort and motivation. Almost half of each group agrees, "If I didn't need good grades, I'd put little effort into my classes." Roughly two-thirds agree, "I don't like to do any more schoolwork than I have to." Whites are the group that agrees most with the latter statement. Finally, nonwhite students want additional tutoring. Although they already report more hours of tutoring per week than white peers, Panel C of Table 4 shows that the gap between what they get and what they want also is larger.

Groups also are similar in the percentages reporting that they enjoy their studies. Panel D of Table 4 shows patterns for three variables pertaining to enjoyment of books and math problems and four measures pertaining to the percentage of the time that teachers make lessons interesting. There is no clear pattern indicating that one group enjoys school more or judges teachers differently regarding how frequently they make lessons interesting. Hispanics, at 62 percent, are the group with the largest percentage saying that they enjoy the books and plays they read for English; percentages among the other groups range from 53 percent of blacks to 58 percent of Asians. Asians (at 62 percent) have the largest percentage that enjoys doing math problems, while the lowest percentage is among whites (45 percent). Whites also are least

likely to agree that history and science books are interesting. Panel E of Table 4 shows a high level of agreement among the groups about the percentage of the time that teachers make lessons interesting. Note that with the minor exception of Hispanics in social studies, fewer than half of each group agrees that teachers in any subject make lessons interesting more than half the time. For all of the groups, math ranks lowest and the other three subjects are roughly even with one another. For all groups, students with higher

**Table 4**

## Attitudes About School and Achievement

***Panel A: How strongly friends agree with the statement "It's important to study hard to get good grades."***

| | Black | White | Hispanic | Asian | Mixed |
|---|---|---|---|---|---|
| **How important friends believe it is:** | | | *Column Percentage* | | |
| Very important | 56 | 42 | 49 | 54 | 45 |
| Somewhat important | 38 | 49 | 40 | 39 | 45 |
| Not too important | 5 | 7 | 8 | 6 | 7 |
| Not at all important | 1 | 1 | 2 | 1 | 3 |
| Total | 100 | 100 | 100 | 100 | 100 |

***Panel B: Levels of agreement with two statements about effort***

| | | | | | |
|---|---|---|---|---|---|
| **Statements About Effort** | | | *Percentages That Agree* | | |
| If I didn't need good grades, I'd put little effort into my classes. | 42 | 42 | 45 | 43 | 44 |
| I don't like to do any more schoolwork than I have to. | 64 | 74 | 62 | 58 | 71 |

***Panel C: Actual and desired weekly hours of tutoring***

| | | | | | |
|---|---|---|---|---|---|
| **Hours of Tutoring** | | | *Hours per Week* | | |
| Mean reported actual hours per week | .83 | .47 | .78 | .63 | .67 |
| Mean reported desired hours per week | 1.45 | .78 | 1.35 | 1.20 | 1.12 |
| Desired minus actual | .63 | .32 | .53 | .57 | .46 |

***Panel D: Percentages reporting that they enjoy reading school books and doing math problems***

| | | | | | |
|---|---|---|---|---|---|
| **Statements About Enjoyment** | | | *Percentages That Agree* | | |
| I like the books and plays we read for English. | 53 | 57 | 62 | 58 | 54 |
| I enjoy doing math problems. | 54 | 45 | 57 | 62 | 47 |
| The history and science books are interesting. | 40 | 35 | 51 | 48 | 37 |

***Panel E: Percentages reporting that the teacher makes the subject interesting more than half the time***

| | | | | | |
|---|---|---|---|---|---|
| **Subject** | | | *Percentages That Agree* | | |
| Math | 32 | 31 | 39 | 39 | 30 |
| English | 41 | 45 | 47 | 44 | 43 |
| Social Studies | 44 | 49 | 51 | 45 | 46 |
| Science | 42 | 45 | 49 | 49 | 43 |

grade-point averages are more prone to feel close to teachers, more likely to think that grading is fair, and less likely to think that friends avoid asking for help when they need it. Panels A and B of Table 5 show that among students with similar grade-point averages, students of different race/ethnic groups are quite similar in their views regarding whether grading is fair and whether they feel close to their teachers. Panel C of Table 5 shows that students with higher grade-point averages are less inclined to believe that friends avoid asking for needed help.

Finally, one small but nonetheless notable difference is among students with grades in the "A- to A" range. Among these students, whites are consistently the most likely to consider grading fair, to feel close to their teachers, and to say that friends do not avoid asking for help. As most of what this paper has discussed, this pattern for white students in the "A- to A" range holds not only in the aggregate but also for most individual districts. One plausible explanation that is impossible to prove or disprove with the present data is that teachers are more friendly and supportive to high-achieving white students than to white students with lower grades or students of other racial and ethnic groups.

**Table 5**

**Percentages of Students Who Agree With Two Statements About Fairness in Grading and Closeness to Teachers, Tabulated by Race/Ethnicity and Grade-Point Average**

***Panel A: How strongly friends agree with the statement "It's important to study hard to get good grades."***

| Student's Grade-Point Average at the End of the Last Term | Black | White | Hispanic | Asian | Mixed |
|---|---|---|---|---|---|
| ***Panel A: Percentage in each cell who agree, "My teachers DON'T grade me fairly."*** | | | | | |
| D+ or below | 35 | 38 | 35 | 38 | 41 |
| C- to C+ | 30 | 28 | 26 | 26 | 34 |
| B- to B+ | 23 | 22 | 20 | 22 | 26 |
| A- to A | 20 | 12 | 15 | 24 | 21 |
| Group total | 26 | 18 | 22 | 19 | 27 |
| ***Panel B: Percentage in each cell who agree, "I DON'T feel close to any of my teachers."*** | | | | | |
| D+ or below | 48 | 50 | 52 | 57 | 50 |
| C- to C+ | 42 | 45 | 45 | 49 | 47 |
| B- to B+ | 38 | 39 | 38 | 37 | 40 |
| A- to A | 39 | 33 | 39 | 34 | 37 |
| Group total | 40 | 37 | 41 | 38 | 41 |
| ***Panel C: Percentage of students who agree that friends don't ask for help even if they need it, tabulated by race/ethnicity and last term's grade-point average.*** | | | | | |
| D+ or below | 31 | 36 | 39 | 35 | 38 |
| C- to C+ | 29 | 28 | 31 | 23 | 31 |
| B- to B+ | 25 | 22 | 27 | 21 | 21 |
| A- to A | 22 | 15 | 26 | 16 | 20 |
| Group Total | 27 | 19 | 29 | 19 | 24 |

## Implications for Policy and Practice

Findings in this paper have implications for schools and communities as well as for state and federal policymakers. For schools and communities, there are four recommendations.

**1. Assume no motivational differences.** It seems likely that incorrect assumptions about group differences in effort and interest may lead some schools to underinvest in searching for ways to raise achievement levels among African-Americans, Hispanics, and some mixed-race students. Teachers should assume that there are no systematic, group-level differences in effort or motivation to succeed, even when there are clearly observable differences in behavior and academic performance.

**2. Address specific skill deficits.** Racial and ethnic disparities in self-reported understanding of lessons and readings call attention to the fact that gaps in standardized test scores and school grades reflect real disparities in academic knowledge and skill. To help raise achievement and close gaps, schools should endeavor to identify specific skill and knowledge deficits that underlie comprehension problems for individuals in particular racial and ethnic groups and respond in targeted ways.

**3. Supply ample encouragement routinely.** Given the importance that black and Hispanic students assign to teacher encouragement, teachers need to be aware of what students regard as encouraging. Using this awareness, they need to provide effective forms of encouragement routinely. Further, as the other recommendations imply, encouragement should be matched with truly effective instruction and other forms of academic support both inside and outside the classroom.

**4. Provide access to resources and learning experiences.** In response to differences in family background advantages, schools could supply more educational resources and learning experiences outside the home. They could provide access to books and computers and extracurricular opportunities for intellectual enrichment.

Even in the well-to-do suburban communities examined in this paper, teachers and youth-serving professionals may need targeted professional development in order to follow these recommendations. Professional development requires resources. To be persuaded to provide such resources, policymakers need to understand the rationale. At least initially, these recommendations may seem to conflict with current fashions in education policy. In fact, however, there is complementarity.

For the past several years, policymakers have placed a heavy emphasis on standards-based reforms. Promoted most prominently by the No Child Left Behind legislation, such reforms are the centerpiece of a national strategy for raising achievement and closing achievement gaps. At their core, standards-based reforms entail a heavy focus on content and alignment. Specifically, there is to be alignment between content standards (i.e., the prescribed knowledge that students are supposed to learn), the content of the curriculum, the content tested on state assessments, and the content that teachers are trained through their schooling and professional development to understand and teach. With some notable exceptions, the possibility that relationships might affect whether students actually learn the content that teachers are trying to teach seldom enters the policy discourse. Nonetheless, findings in this paper concerning the importance of encouragement to black and Hispanic students suggest that teacher-student relationships may be quite important resources for raising achievement and narrowing achievement gaps.

Content, pedagogy, and relationships are three legs of the instructional tripod. If one leg of a tripod is too weak, it falls over. Professional development activities that equip teachers to attend simultaneously to all three legs of the instructional tripod stand a better chance of helping states meet their education-policy objectives. Attending well to all three will affect a teacher's capacity and commitment to engage students effectively in learning and, therefore, will influence students' preparation to reach prescribed performance standards in the domains of particular content standards that state policies have articulated.

## Conclusion

There is much that does not meet the teacher's eye, but that nonetheless may affect how ambitiously and effectively students learn. African-American and Hispanic students in MSAN districts have fewer family-background advantages on average, compared to white and Asian students. In addition, they have lower grade-point averages and report less understanding of their lessons. They have lower homework completion rates than white classmates but report spending virtually the same amount of time doing homework. Skill gaps and differences in home academic supports—not effort or motivation—appear to be the primary explanations for why they complete less homework and get lower grades than whites. Conversely, part of the reason that Asians complete more homework and get higher grades than

other nonwhite groups is that they devote more time to their studies.

Perhaps the most interesting finding here is the distinctive importance of teacher encouragement as a reported source of motivation for nonwhite students, especially African-American students, and the fact that this difference is truly a racial one, mostly unrelated to measures of socioeconomic status. The special importance of encouragement highlights the likely importance of strong teacher-student relationships in affecting achievement, especially for African-American and Hispanic students. It also highlights the importance of trying to understand racial and ethnic differences in how students experience the social environments of schools and classrooms.

Across the nation, standards-based reforms have been catalysts for a growing number of professional development initiatives to prepare educators to teach new content standards. However, if the aim of these efforts is to raise achievement and narrow gaps, focusing on content and pedagogy alone may be insufficient. A key implication of the findings in this paper is that even in well-to-do suburbs, professional development strategies might wisely attend to all three legs of the instructional tripod—content, pedagogy, and relationships—not just one or two. In this way, such strategies may prepare teachers better to inspire the trust, elicit the cooperation, stimulate the ambition, and support the sustained industriousness that are required in order to find success with No Child Left Behind.

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# Building Student Achievement: In-School and Out-of-School Factors

*By Reginald Clark, Ph.D.*

There is much that is not known about the actual lives of academically successful youths, especially those successful youths from impoverished backgrounds. Researchers have conducted few studies of achievement patterns among the same cohort of urban students that adequately take into account the role of family, school, and neighborhood process factors. That is, studies rarely analyze students' school achievement patterns in relation to the students' daily and weekly activities and routines and their overall lifestyles. Data presented in this paper show that variations in students' achievement test scores are closely associated with actions that are taken by students, teachers, parents, and others in pursuit of achievement.

Data from four samples drawn from exploratory research studies are discussed in this paper. There are three elementary school samples (Nashville, Tennessee; Bakersfield, California; and Los Angeles, California) and one high school sample (Long Beach, California). Exhibit 1 below lists pertinent information about each sample.

**Exhibit 1**
**Four Data Samples Representing 552 Students**

| Grades 1-6 Students<br>n=459<br>Nashville, Tennessee<br>(1994) | Grades 1-3 Students<br>n=13<br>Bakersfield, California<br>(1992) | Grade 4 Students<br>n=31<br>Los Angeles, California<br>(1984) | Grade 11 Students<br>n=49<br>Long Beach, California<br>(1997) |
|---|---|---|---|
| Normal curve equivalency (NCE) score on the reading total portion of the Tennessee Comprehensive Assessment Program (TCAP) | Normal curve equivalency (NCE) score on the reading total portion of the Comprehensive Test of Basic Skills (CTBS) | Normal curve equivalency (NCE) score on the reading total portion of the Comprehensive Test of Basic Skills (CTBS) plus teacher assessment | Writing score on standardized school district portfolio assessment |
| Reports data on in-school and out-of-school factors | Reports data on in-school factors | Reports data on out-of-school factors | Reports data on out-of-school factors |

## Factors That Contribute to Student Achievement

In my most comprehensive study to date, researchers analyzed data gathered from 459 elementary school students, their parents, and teachers in five schools in Nashville, Tennessee. A student was included in the survey if one of his or her parents responded to a parent questionnaire that was sent home from the school, and if the student completed a survey about his or her weekly time use. This sample consisted of 247 female and 212 male elementary students. Teachers of all 459 students completed a teacher survey (n=19). For analysis purposes, each teacher's responses were linked to the time-use data and the parent survey data for each one of their specific students.

There were significant race/ethnicity and income differences among the student population. The majority of the students were White (57 percent). Blacks composed 33 percent of the sample. The rest of the sample consisted of Asians, Latinos, and "others" (10 percent). For this study, student participation in a federally sponsored free or reduced-price lunch program was used as an indicator of social class status. Eighteen percent of the White students were receiving free or reduced-price lunches. More than three times as many of the Black students (58 percent) were receiving free or reduced-price lunches at the school.

There were achievement test performance gaps relating to socioeconomic status (SES) and race in the sample. With regard to SES, twice as many "lower-achiever" students were receiving support from the federal school lunch program. Approximately 48 percent of the lower achievers and 24 percent of the "high-achiever" students were receiving free or reduced-price lunches at the school. (In the Nashville study, high achievers were students whose normal curve equivalency [NCE] scores on the reading total portion of the Tennessee Comprehensive Assessment Program were at or above the 50th percentile. Lower-achieving students had scores below the 50th percentile.) Race disparities in achievement test scores also were apparent. The reading total median NCE score was 65.3 for the White students in the sample and 44.1 for the Black students. A total of 277 students (60 Black, 192 White, and 25 "other") had test scores ranking them as high achievers, while 182 students (93 Black, 71 White, and 18 "other") had scores in the lower-achievers category.

As a result of these racial variations in achievement, the Nashville data provide a rich opportunity to assess what factors may contribute to creating the achievement gap between higher- and lower-achieving students from different social class and racial groups. The findings potentially have great utility in identifying practices (processes) that can impact the narrowing of the achievement gap. From this information, policies can be proposed to address the educational needs of lower-achieving students, the majority of whom have lower-income and ethnic-minority status (Black, Asian, Latino).

In analyzing this data set, correlation and multiple-regression analysis methods were used to explain variations in students' scores on standardized tests of reading. All scores were converted into standardized Z scores to conduct the analysis. The correlation analysis revealed profoundly higher relationships for instructional-process factors (such as teacher estimate of student time on classroom learning and teacher perception of student capabilities, teacher-parent communication patterns, parental standards for student academic pursuits, and students' patterns of out-of-school time use) than for noninstructional factors (such as family income, whether or not income is from government aid, and participation in a free lunch program). In fact, the instructional-process factors explained far more of the total variance in students' academic scores than family ethnicity, economic circumstances, and perceived safety level in the community of residence combined.

The results of the analysis revealed that about 51 percent of the variation in student test scores was accounted for by school-process factors and family-process factors. Exhibit 2 shows that when instructional-process factors are taken into account, student ethnicity and parent socioeconomic status are nearly eliminated as impacts on student achievement. Indeed, beta scores on the family background factors (ethnicity and socioeconomic status) are negatively correlated with students' scores on the Tennessee Comprehensive Assessment Program test of reading, after taking into consideration the pertinent school-process factors and out-of-school family and time-use factors. Similarly, beta scores on the community-safety variable (as perceived by parents) independently contributed less than 10 percent to the variation in students' test scores in reading.

These findings, in combination with findings in the sections below, suggest that the factors that matter most for student achievement on standardized tests are as follows: teacher instructional actions and expectations for students; students' total weekly out-of-school time in

**Exhibit 2**

**Predicting Student Achievement in Reading From Instructional and Noninstructional Variables**

| Variable | B | b | t-value | R | $R^2$ | $R^2$-Adjusted |
|---|---|---|---|---|---|---|
| Time on task in school | 0.173 | 0.191 | 4.256*** | 0.305 | 0.093 | 0.091 |
| Teacher expectations | 0.199 | 0.185 | 3.946*** | 0.464 | 0.216 | 0.211 |
| Student out-of-school time | 0.840 | 0.381 | 9.000*** | 0.672 | 0.452 | 0.447 |
| Parent expectations | 0.298 | 0.177 | 4.219*** | 0.694 | 0.482 | 0.476 |
| Teacher-parent communication | 0.114 | 0.074 | 1.741* | 0.698 | 0.487 | 0.481 |
| Teacher's age | 0.026 | 0.029 | 0.603 | 0.699 | 0.488 | 0.480 |
| Safe community | 0.089 | 0.099 | 2.594** | 0.707 | 0.499 | 0.490 |
| Family background | -0.113 | -0.085 | -2.298** | 0.712 | 0.506 | 0.496 |

*** = p<.001 ** = p<.05 * = p<.1

high-yield activities; activity quality; parental standards, beliefs, and expectations; and teacher-parent communication actions.

## Teacher Instructional Actions and Expectations for Students

Data from the Nashville and Bakersfield, California, studies were used to assess the role of teacher classroom actions on student achievement. In the Nashville study, 19 elementary school teachers of 459 first- through sixth-grade students responded to the following questions:

- On an average day, how many hours or minutes do you think your students are actively engaged in learning in your classes?
- What percentage of the poor-reader students in your classes have the biological capability to one day attend and complete college?
- What percentage of the poor-reader students in your class would you say want to go to college?

A multivariate analysis showed that more than one-fifth of the variance in students' reading achievement scores (22 percent) was accounted for by teacher responses to these three questions. Higher-achieving students were more likely to have a teacher who provided more exposure to classroom lessons ("time-on-task"), who believed the majority of lower-achieving students in her class had the biological capability to one day attend and complete college, and who believed the majority of her lower-achieving students wanted to go to college one day,

The Bakersfield, California, study offers more evidence of the strong impact of teacher instructional actions in the classroom. This study tested the hypothesis that high-achieving students spend more time than low-achieving students learning academic lessons in the classroom. Videotapes were made of students in 13 first- through third-grade classrooms in five Bakersfield elementary schools. The racial composition of these classrooms and schools, which was representative of the Bakersfield first- through third-grade student population, was about 40 percent Latino (Mexican American), 40 percent White, 15 percent African American, and 5 percent Asian American (Southeast Asian).

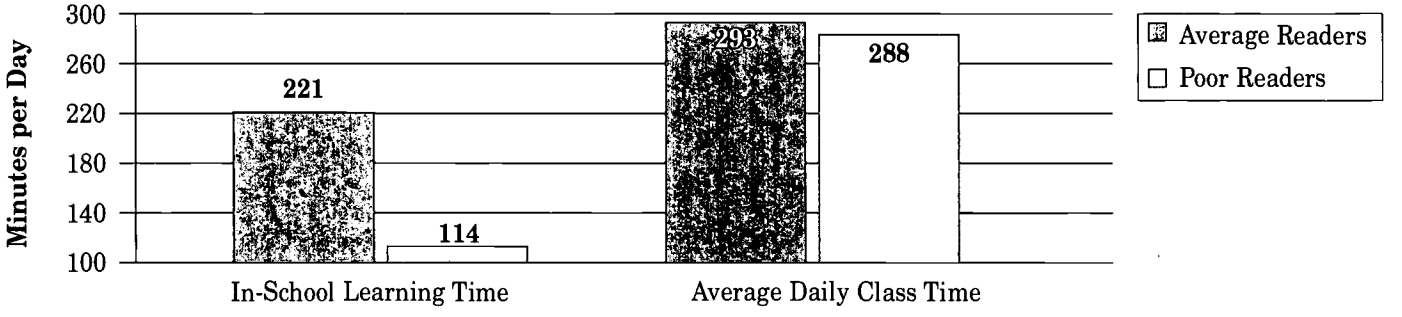
A video camera was set up in a corner in each of the 13 classrooms. The camera taped the activities of the students and teachers throughout one 6-hour day of classes. The tapes were later analyzed to determine learning time and class time. Researchers identified one African-American student in each classroom and timed his or her activities using a stopwatch. When the student appeared to be engaged in learning activities (such as reading, working alone on a lesson, listening to a lecture, solving a problem with classmates, or asking questions), the stopwatch was turned on. When the student was off-task or involved in behaviors that were not learning activities, the stopwatch was turned off until the student started another learning activity.

NCE scores for reading on the Comprehensive Test of Basic Skills (a standardized basic skills test) later were gathered for each of the 13 observed students. Nine of the target students had an NCE score below the 20th percentile. These students were labeled "poor readers."

Four of the target students had an NCE score between the 35th and 45th percentile; they were assigned the designation of "average readers." Exhibit 3 shows that although both groups of students had almost the same amount of available class time, average readers were involved in classroom learning 1 hour and 47 minutes more each day than poor readers. Average readers spent 3 hours and 41 minutes engaged in daily learning while poor readers spent only 1 hour and 54 minutes in these same activities.

**Exhibit 3**

**Daily In-School Learning Time by Reading Achievement Level**




**1st through 3rd Graders - Bakersfield, CA (n=13)**

## Students' Total Weekly Out-of-School Learning Time and Activities

Two key hypotheses are pertinent here. The first hypothesis is that high-achieving students spend more time engaged in academic lessons in the classroom than low-achieving students and they spend more time (hours per week) engaged in structured out-of-school literacy-enhancing activities. Second and conversely, low-achieving students spend less total time engaged in structured learning activities (which includes combined in-school and out-of-school time).

The data show that at the elementary and high school educational levels, high achievers spent more time in out-of-school high-yield learning activities than low achievers. High-yield out-of-school learning activities include such diverse activities as leisure reading, writing, studying, getting tutored, participating in community and school youth clubs and programs, working on the computer, watching educational television, volunteering, doing hobbies, and playing organized youth sports. The time spent by students in these activities is an indicator of the extent of their learning activities outside of school.

In particular, better readers spent more out-of-school time involved in powerful, high-impact (high-yield), language-enriched activities that promote successful acquisition and expansion of developmentally appropriate reading skills. These activities included the following:

- Weekly time dialoguing with adults, youth club enrichment activities, hobby and volunteer activities, organized sports, and educational television.
- Regular study and homework routines, often with adult or peer monitoring and support.
- Reading and writing practices in the home, sometimes including composing text on the computer.

In the Nashville elementary school sample, high-achieving students spent an average of 7 hours and 56 minutes per week engaged in out-of-school learning activities, while low-achieving students spent only 7 hours per week engaged in out-of-school learning activities. This difference in time was not statistically significant.

Similar group differences were found in the sample of 11th-grade high school students in Long Beach, California. Based on scores on a district-approved writing test, 20 high school students were classified as high achievers and 30 were classified as lower achievers. The high achievers were using more of their out-of-school time in learning activities than the low achievers. High-achieving high school juniors spent 15 hours and 14 minutes per week

doing learning activities outside of school. Their low-achieving counterparts spent much less time—8 hours and 49 minutes per week—doing these activities. (The time difference between the two groups equals 6 hours and 25 minutes per week.)

The second hypothesis is that low-achieving students spend less total time engaged in structured learning activities than do high-achieving students. Unstructured leisure activities include but are not limited to hanging out and playing, talking on the telephone, playing video games, using the computer for fun, playing board games, watching television or movies, listening to music, attending sports events, resting, or relaxing. Data from the Nashville elementary school sample support this hypothesis. In the Nashville sample, student time spent in leisure activities was negatively correlated with achievement. That is, high-achieving students spent less time engaged in unstructured leisure activities than did low-achieving students. High-achieving students spent an average of 27 hours and 13 minutes per week in unstructured activities. Low-achieving students spent 28 hours and 45 minutes per week in these activities.

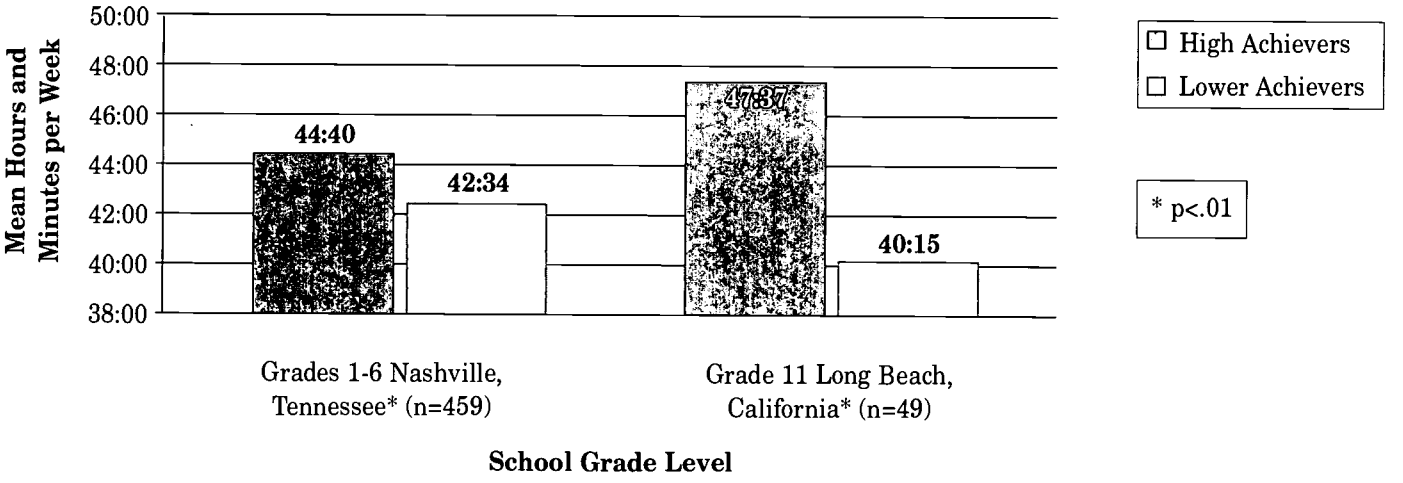
## The Significance of Total Weekly In-School and Out-of-School Learning Time

These data consistently show that high achievers at the elementary and high school levels spent more time in weekly learning activities than their low-achieving counterparts. Such learning activities include activities in school and in out-of-school enrichment situations. Exhibit 4 shows that high-achieving first through sixth graders spent a total of 44 hours and 40 minutes per week doing weekly learning activities (in-school and out-of-school), while low-achieving first through sixth graders spent 42 hours and 34 minutes per week doing these same activities. (The difference between the two groups equals 2 hours and 6 minutes per week.) Total weekly learning time was positively correlated with achievement for the elementary students.

Following the same pattern, the high-achieving high school juniors in Long Beach, California, spent 47 hours and 37 minutes per week doing learning activities (in-school and out-of-school) while low-achieving high school juniors spent 40 hours and 15 minutes per week in these activities. (The difference between the two groups equals 7 hours and 22 minutes per week.) Findings for both elementary and high school students were statistically significant. These weekly differences in time-use patterns very likely are cumulative over time. For example, the weekly difference of 2 hours 6 minutes for elementary students translates into 79 hours 48 minutes during a 38-week school year. The nearly 80-hour yearly difference in "engaged learning activity" may contribute to higher-scoring students, on average. As time goes by, high and low achievers may display more obvious differences in their amount of exposure to constructive out-of-school learning activities.

**Exhibit 4**

**Total Weekly In-School and Out-of-School Learning Time by Achievement Level**



## Salient Effect of Activity Quality on Student Achievement

Another revelation from the data is that student achievement on standardized tests of reading is correlated with the quality of students' active engagement in out-of-school, high-yield activities. Quality was operationalized by the parent's perception of how intently the student focuses on the activities, how enthusiastically the student performs the activities, and how frequently the student takes on leadership roles while doing the activities.

In the Los Angeles study, it was hypothesized that the quality of students' constructive learning activities is correlated with student achievement in reading. This hypothesis was tested with 31 fourth-grade Los Angeles public school students, their parents, and educators, who participated in a comprehensive ethnographic study on the effects of learning activities on achievement. Fourteen of the students were Latino (Mexican American), nine were Black, and eight were White. The parents were of the same ethnic group as their children.

The 31 students were classified as high achievers and lower achievers based on their scores on standardized tests and teacher ratings of students' classroom learning behavior (provided during face-to-face interviews with the 14 teachers). Twenty students were classified as high achievers based on their NCE scores above the 50th percentile on the total reading portion of the Comprehensive Test of Basic Skills and positive teacher ratings. Eleven students were classified as lower achievers based on their NCE scores at or below the 50th percentile on the total reading portion of the Comprehensive Test of Basic Skills and/or negative teacher ratings. The NCE scores on the total reading portion of the Comprehensive Test of Basic Skills were obtained from school records. Teacher assessments of each student's classroom skill level were obtained from teacher interviews.

Specifically, the quality of two types of out-of-school learning activities were examined: high-yield literacy activities and high-yield enrichment activities. For this analysis, the definition of high-yield literacy activities in out-of-school learning included reading, writing, and studying. High-yield enrichment activities in out-of-school learning included doing hobbies and playing games. Parents responded to ethnographic interview questions (audiotaped) about their child's behavior at home during each of the five activities. Quality was measured by ratings scores assigned to parents' oral responses pertaining to their child's level of enthusiasm, focus/effort, and leadership role behavior during each of the activities. Parents' responses to each of these three measures were rated as "often," "sometimes," or "seldom" (coded as 3, 2, and 1, respectively).

Although this sample was small and nonrandom, there were identifiable achievement test performance gaps related to race. Twenty students were classified as high achievers based on test scores: Eight high achievers were White, nine were Mexican American (seven English-language dominant and two Spanish-language dominant), and three were Black. Eleven students were classified as lower achievers: Six lower achievers were Black, and five were Mexican American (three English-language dominant and two Spanish-language dominant). None of the White students in this sample were classified as lower achievers.

The data show that high achievers generally were involved at a higher-quality level in the five constructive out-of-school activities more often than lower achievers. Students' quality of active engagement while doing high-yield activities was statistically significant for the set of activities.

## Parental Beliefs and Expectations

The beliefs and attitudes of parents play a significant role in student success in becoming competent readers. In the Nashville study, parents of 459 students responded to questions about their expectations for their child's learning and their perception of whether they had been supported by their child's teacher. Specifically, they were asked the following questions:

- Please check the highest level of education you expect your child to eventually complete someday.
- How much help or encouragement have you received from your child's teacher?

Analysis of the data showed that parents' responses to these questions were significantly associated with students' reading achievement scores in the multivariate analysis that was conducted (see Exhibit 2 on page 13). Clearly, students benefit when parents (1) set high standards for their child's performance in school, and (2) feel personally supported by partnerships they have formed with their child's teachers.

## Teacher-Parent Communication

Parent beliefs are likely to be influenced by teacher-parent communication as well. In other words, parents may benefit from well-organized teacher-led communication actions,

regardless of the parents' initial mind-set when their children start school. When teachers take actions to cultivate instructional partnerships with parents, those parents are more likely to support their children's learning at home; also, the students of these parents are more likely to be perceived by the teachers as positively involved in classroom learning activities. Evidence from the Nashville study supports this hypothesis. In the Nashville study, teachers were asked the following questions:

- What proportion of your students' parents did you provide with information or materials (not including homework) to help their children develop and refine skills needed in school for each subject area (reading, English/language arts, math)?
- How effective in motivating parents to help their children at home is the information you provided for the parents?

Parents were asked the following question:

- How well do you think you work with your child's teacher?

The data showed that students' scores were higher on the Tennessee Comprehensive Assessment Program standardized test of reading when teachers reported more communication with parents and when those parents perceived themselves to be engaged in a healthy partnership with the teacher. These factors accounted for about 7 percent of the variance in students' reading achievement scores (see Exhibit 2 on page 13).

## Role of Family Background and Neighborhood Safety

The multivariate analysis in Exhibit 2 (see page 13) shows that after variations in students' in-school and out-of-school experiences fully are accounted for, family background (ethnicity and socioeconomic status) alone contribute relatively little to variations in student achievement (9 percent). Parent perceptions of community and neighborhood safety similarly explained a relatively small amount of the difference in a student's test scores (10 percent) after taking into consideration activity-focused school factors and out-of-school factors. Essentially, family-background factors do not appear to be independently or primarily responsible for variations in student achievement levels. Rather, student achievement scores on standardized tests are most consistently and powerfully associated with the behaviors of students, teachers, and parents, as described in earlier sections of this article.

## Summary

The data show that when an appropriately comprehensive range of in-school and out-of-school student and adult behaviors is taken into account, race and class do not strongly correlate with student achievement levels. Students', teachers', and parents' performance (or nonperformance) of the behaviors described in earlier sections of this article show the strongest correlations to student achievement. These data suggest that the achievement gap between students from different races and social classes largely may be most directly associated with variations in the time-use habits of students (in and out of school), and the involvement of parents, teachers, and adult mentors in students' activities.

Further research is needed with larger urban populations to confirm and expand the findings of these exploratory studies. Future studies should utilize multiple methods, including experimental designs with random samples; data gathering and analysis techniques that capture students' total array of learning habits in school, home, and community settings; and data gathering and analysis techniques that capture students' perceptions of the form and function of their out-of-school learning efforts during out-of-school activities. More studies should consider a rigorous ecological approach to student learning (i.e., examine the multiple settings where a specific cohort of randomly selected students regularly spend time) so that they may adequately capture the most significant determinants of students' school performance on standardized tests.

## Policy Options

Collectively, these studies do not provide a complete or perfect set of correlates of student achievement. At best, the results from this work are suggestive of the deeper structural behavior patterns that are associated with variations in student achievement. Nevertheless, results from the ethnographic and quantitative work demonstrate that variations in student achievement on standardized tests (whether within-group or between groups) are closely associated with variations in what people do. This fundamental fact presents the prudent reader with clues about particular educational policies and practices in urban schools and community agencies that are likely to affect the achievement gap.

Schools that expect to close the student achievement gap in reading will need to create practices that first accomplish the following goals:

- Close the gap in the instructional habits and effectiveness of teachers.
- Close the gap in the out-of-school learning habits of students.

The data presented, although drawn from relatively small and nonrandom samples, show that students' academic success in reading (as measured by school norm-referenced test performance) frequently was seen when the following situations occurred:

- Students spent at least 3 hours a day with teachers doing structured (presumably well-organized and well-executed) learning activities or lessons.
- Students tended to spend anywhere from 8 to15 hours a week—depending on grade level—in high-yield, out-of-school learning activities (such as reading, writing, study or homework, and intellectually stimulating games and hobbies).
- Students displayed a high level of enthusiasm, focus/effort, and leadership role behavior during each of the activities.
- Students were not engaged in excessive amounts of unstructured leisure activity (e.g. hanging out or watching television), work or chore activities, or travel or commuting activities.
- Parents frequently communicated to their students that the parent required the student to fully participate in school learning activities, succeed on school tasks, and ultimately complete four years of college one day.
- The student's teacher reached out and contacted parents, built rapport with the parents, and invited parents into a working partnership. Then the teacher followed up with regular reports to parents about the student's classroom performance and overall academic progress, information about homework, and information on how to support the student's learning at home.

The focus of policymaking, in large part, must be on creating and maintaining programs and accountability systems that increase students' involvement in success-oriented lifestyles. These programs and accountability systems must require school staffs and parents to demonstrate that their students are engaged in the requisite types and amounts of constructive school-classroom learning activities and constructive out-of-school learning activities. If these programs are well-designed, they can add significantly to students' opportunity to learn. When students are not being engaged in a minimal threshold level of the constructive activities, schools and/or parents should be required to explain why. Then a plan for correcting the opportunity-to-learn threshold deficiencies should be created and implemented. Policymakers must provide appropriate training, resources, and incentives to generate the cultural shift that will be necessary to instigate these practices in most low-achieving school (and after-school) settings.

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NCREL POLICY ISSUES

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# POLICY Q&A ISSUES

**Why should we be concerned about achievement gaps in middle-income, suburban schools?** Middle-class, suburban schools often are overlooked in the achievement gap debate. Yet an achievement gap exists even in some of the most well-resourced, middle-class school districts in the nation. The No Child Left Behind legislation makes identifying and addressing achievement gaps a critical concern—not just for urban school districts, where attention has been focused for years, but for suburban school districts as well. This newer emphasis on suburban districts is especially compelling, given 2000 Census data that shows one-third of all black children and roughly half of all Hispanic, Asian, and white children live in suburban communities. As illustrated in Ron Ferguson's report (see "Addressing Racial Disparities in High-Achieving Suburban Schools" on page 1), students in Grades 7-11 in Minority Student Achievement Network schools participated in a survey to help researchers understand the conditions that may facilitate or hinder high achievement among racial groups.

**What are the critical components for narrowing the achievement gap in middle- and upper-income suburban schools?** Survey findings in Ferguson's report point to three components for narrowing the achievement gap in middle- and upper-income suburban schools: (1) reducing skill deficits; (2) increasing home resource supports; and (3) supporting professional development programs that equally emphasize content, pedagogy, and teacher-student relationships. The data show no racial/ethnic differences in effort or motivation to succeed among students in the same grade and taking the same classes, but there are significant group differences in skill level and home resources. Therefore, schools should identify and target skill level and knowledge differences among groups of students. Additional resources should be provided to give black and Hispanic students greater access to computers, books, and extracurricular activities that are intellectually enriching and outside the home. Finally, at a 3:1 ratio, black students said teacher encouragement was a greater motivating factor for them than teacher demand. Hispanic students reported a 2:1 ratio in favor of teacher encouragement. To raise the performance levels of black and Hispanic students, in particular, teachers should be encouraged to routinely incorporate encouragement into their classroom practices.

**What do we know about effective in-school and out-of school factors that support urban students' achievement?** Not enough research attends to the breadth of school, community, and home conditions that support high achievement, especially among inner-city children. Reginald Clark's report (see "Building Student Achievement: In-School and Out-of-School Factors" on page 11) points to time-use habits of students (in and out of school), and the involvement of parents, teachers, and adult mentors in students' activities' as key contributors to closing achievement gaps. Specifically, the following five factors appear to influence urban student achievement: (1) teachers' actions in the classroom; (2) students' weekly participation in high-yield, in-school and out-of-school activities; (3) quality of students' participation in out-of-school activities; (4) parental beliefs and expectations; and (5) parent-teacher communication.

**Do these studies support what we're learning about the impact of a highly qualified teacher on closing achievement gaps?** Yes, absolutely. Both authors suggest that improving teachers' content knowledge and instructional skill will contribute to closing achievement gaps among groups of students, whether in suburban or urban settings. Moreover, Ferguson reports that professional development programs also must focus on student-teacher relationships as an especially important factor for black and Hispanic students' performance. Finally, both authors find evidence to support resource allocation for intellectually enriching in-school and out-of-school activities, practices, and programs. — *Judy Stewart, Ph.D.*

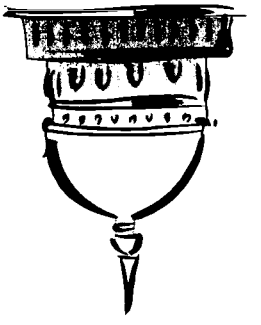
# The Smart Library on Closing the Achievement Gap: NCREL's New Resource for Information

NCREL presents the *Smart Library on Closing the Achievement Gap*, a new resource for information and research on closing the achievement gaps. It is available online at **www.ncrel.gap.smartlibrary.info**. Education professionals seeking in-depth information about the achievement gaps now have a wealth of research and policy sources about this critical education topic right at their fingertips. The *Smart Library* presents this information in a user-friendly, easy-to-navigate, and highly readable format.

You can begin with an introduction to the achievement gap—what it is and what causes it; or you can jump right into the complexity of the issue and find answers to how school segregation may affect racial differences in achievement, information on trends in white-minority achievement gaps, or strategies that schools can use to help close the achievement gap.

If you attempt to understand the trends associated with the achievement gap, you likely will stumble upon the following information from the Center on Education Policy, taken directly from the *Smart Library*: "Math scores have shown the biggest improvement in the achievement gap. Between 1973 and 1999, the black-white gap narrowed for children ages 9, 13, and 17. The greatest change was made between 1973 and 1986, when the gap decreased by 22 points on the NAEP scale."

For this information and more, visit NCREL's *Smart Library on Closing the Achievement Gap*.



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